New parameters to set Romance languages in morphological typology. Evidence from French Anna Sőrés Université Lumière Lyon2 Laboratoire DDL Dynamique du Langage

## **1. Introduction**

Recent research on morphological typology has concentrated on the distinction of agglutination and fusion while other phenomena received little attention. The paper raises the case of French as well as other modern Indo-European languages that early theoreticians like F. and A.W. Schlegel [1] classified as "fusional – analytic". This label seems us rather contradictory and insufficiently studied, so that the paper aims at studying French in two ways: 1) Greenberg's statistical typology, 2) a more refined version emphasizing on cumulation of several morphological categories in one morpheme and on the proportion of different types of grammatical morphemes. Since previous statistical methods turning out to be insufficient, the paper proposes to study relations between the number of grammatical categories expressed in the language, according to the number of variable word classes. A synthesis of these observations allows labeling French as "more fusional than analytic". In conclusion, it will be underlined that setting Romance languages in morphological typology remains interesting in the diachronic point of view.

## 2. Terminology and methodology

Key words: word classes, morphological category (gender, number, etc.), morpheme, cumulation, portmanteau. In order to make comparisons, French, Hungarian and Chinese texts [2], each of 100 words have been counted according to Greenberg's parameters and some developed ones.

# 3. Statistical methods

According to Greenberg's typology [3], the degree of synthesis in French is low, 1.35, compared to English 1.68, or Hungarian 2.05, while the degree of agglutination is .81 in French, .30 in English .30 and .84 in Hungarian. The second parameter cannot be evaluated without comparing it to the index of synthesis. In fact, regarding the index of agglutination, French would appear like an agglutinating language, while considering the first index as well, "morpheme per word", it seems more analytic than the two other languages cited.

In order to examine how French (and other languages labeled this way) can be flectional and analytic at the same time, I propose another statistic method based on the index called **semantic unit per grammatical morpheme (index s/m)**. I propose to count the number of grammatical morphemes, i.e. i) autonomous function words, e.g. prepositions, conjunctions, ii) affixes representing one semantic unit, e.g. –s, the plural marker in the written code,

and iii) portmanteau morphemes, e.g. (2) where there is an affix representing several categories accumulated, namely tense, aspect, person and number.

The higher the index s/m, the more synthetic the language. Such a statistic is not effective without a comparison, so the same count has been made on a text in Hungarian and in Chinese. The indices are the following: Chinese 1.3; Hungarian 1.1; French 1.5. This result contradicts the traditional view according to which Chinese is analytic - isolating and Hungarian synthetic- agglutinating. However, it is easy to explain it: even if in the Chinese text there are only a few grammatical morphemes, the recurrent ones are those we call portmanteau morphemes, namely personal pronouns and TAM morphemes. At the same time, Hungarian has a high number of grammatical morphemes but many of them, mostly in

number and case marking, illustrate the canonical morpheme having one form and one sense (1/1 morpheme).

Another statistical parameter can be the **proportion of 1/1 morphemes and portmanteau morphemes**; in Hungarian it is 88 % – 11 %, while in French 67 % – 32 %. Portmanteau morphemes can cumulate 2, 3 or 4 grammatical categories. Here we meet with difficulties in analyzing cumulative morphemes: cumulation occurs commonly with person/number and with TAM morphemes [4]. However, in French, and probably in all Romance languages, there are more complex cumulations, in definite articles, possessive pronouns, inflected prepositions or complex verbal affixes and this is a sign of high syntheticity of the language.

## 4. Inflected word classes

Seeing that some methods are good only for indicating tendencies, one has to go on with other investigations on morphological categories expressed by the language in question. Counting alone does not enable us to say to what extent French is fusional and analytic. On the one hand, some word classes are mostly or seldom invariable (conjunctions, adpositions) and they could be subtracted from the number of grammatical morphemes. On the other hand, comparing Hungarian, Latin and French there are no great differences either in the number of word classes inflected for morphological categories or in the number of categories: Hungarian has case marking but few TAM morphemes, Latin has gender and number marking, TAM morphemes but no determiners, in French determiners are inflected for definiteness, gender and number and so on.

It seems much more efficient to examine inflected word classes, i.e. word classes that are more susceptible to variation, namely nouns, verb, determiners and pronouns and see which are effectively inflected in the language in question. According to the morpheme per word parameter, in French the nominal system is less synthetic (1.23) than the verbal system (1.8). But this observation is only valid if one counts nouns, because involving pronouns the index will change.

The examination of the whole set of parameters proposed here allows to consider French more fusional than analytic.

#### **5.** Conclusions

What is morphological typology good for? Obviously, not for classification but for characterization in a synchronic point of view. But in Romance linguistics, if we manage to describe Latin as well as Romance languages and dialects in this morphological framework, it will be possible to measure the morphosyntactic changes that took place between Latin and the modern languages.

#### Notes and references

- [1] SCHLEGEL Friedrich, 1808. Über die Sprache und Weisheit der Indier, Heidelberg.
- SCHLEGEL August Wilhelm, 1818. Observations sur la langue et la littérature provençales. Paris
- [2]GREENBERG Joseph H. 1954. « A quantitative approach to the morphological typology of language », *International Journal of American Linguistics*; 1960, p. 178-194 (reprinted from *Method and Perspective in Anthropology*: Papers in Honor of W. D. Wallis, 1954).
- [3] Author's analysis, helped by a native speaker linguist.
- [4]HASPELMATH Martin, 2000, «The Agglutination Hypothesis: A belated empirical investigation », International Morphology Meeting, Vienna.
- . PLANK Frans 1999. « Split morphology : How agglutination and flexion mix », *Linguistic Typology* 3-3, p. 279-340.